

Phoenix-Goodyear Airport South

Boundaries:

The Phoenix-Goodyear Airport (PGA) South Superfund site is located approximately 17 miles due west of Phoenix, Arizona. The site is in the western part of the Salt River Valley, within the City of Goodyear in Maricopa County, Arizona. The physical boundaries of the PGA South site are Yuma Road to the north, Litchfield Road to the east, Broadway Road to the south, and Reems Road to the west. The site comprises the Phoenix Goodyear Airport (formally owned by the U.S. Navy) and the Lockheed Martin Corporation (formerly the Goodyear Aerospace Corporation and Loral Defense Systems-Arizona) and any groundwater contamination emanating from these areas.

Site History:

- Phoenix-Goodyear Airport served as the Litchfield Park Naval Air Facility since 1942. Goodyear Tire & Rubber Company began operating Goodyear Aerospace at the airport, modifying and repairing aircraft, which were then transferred to the adjoining Naval Air Facility from 1940 to 1945.
- In 1946, the Naval Air Facility was placed in modified maintenance status. Its primary function became the preservation and activation of military aircraft.
- The Navy transferred ownership of the property of the City of Phoenix in 1968.
- In 1974, Goodyear Aerospace discontinued using trichloroethene (TCE) at the site.
- The Arizona Department of Health Services discovered the groundwater contamination in 1981. The EPA added the PGA site to the National Priorities List (NPL) in September 1983.
- In 1984, the EPA began a remedial investigation of the Litchfield Airport Area (presently known as the Phoenix-Goodyear Airport) to characterize the site, discover the extent of the contamination, and identify possible sources. From this study, the site was divided at Yuma Road into a north and a south portion.
- An Operable Unit Record of Decision (ROD) for PGA South was signed in 1987 for the Section 16 Operable Unit. This operable unit addresses groundwater contamination in the upper alluvial unit only in Section 16. Groundwater contaminant concentrations in Section 16 were at least 100 times greater than those of downgradient levels. Therefore, it was essential to quickly address this area to mitigate further contamination to the Subunit A and Subunit B/C.
- The remedial investigation/feasibility study (RI/FS) for the site was completed in June of 1989, and a comprehensive Final Remedy ROD was signed in September 1989 for PGA North and South.

- A consent decree for the final remedy was lodged on May 7, 1991 and entered in November 1991. EPA, the State, Goodyear Tire and Rubber Company, and Loral Defense Systems are signatories. This document binds Goodyear Tire to remediate the Subunit B/C aquifer and contaminated soils.
- In 1992, Goodyear Tire conducted a removal action of metal contaminated soils located at the sludge drying beds. The soils containing chromium and cadmium above the Health Based Guideline Levels (HBGLs) were stabilized, thereby eliminating the risk of exposure by ingestion and inhalation and preventing further migration to groundwater.
- There are two plumes within Subunit C associated with the PGA South Site, caused by conduit wells, which were promptly abandoned. Groundwater extraction and treatment of these two plumes using granular activated carbon began in 1994.
- April 1998, ADEQ approved the closure and decommissioning of the soil vapor extraction (SVE) system. The Vadose Zone Leaching Model (VLEACH) was used to determine that the residual threat to the groundwater is below the maximum contaminant level (MCL). Goodyear Tire has thereby satisfied the requirements under the 1991 consent decree for closure of soils.

Site Status:

- Groundwater monitoring on a regular basis continues at this site. There are currently 236 monitoring points associated with the site.
- In August 1999 and March 2000, two monitoring wells were installed to further define the northern Subunit C plume. An additional extraction well at the leading edge of the plume will be installed to aid in the capture of the plume. Installation of the extraction well has been delayed due to stalled negotiations with the property owner of the preferred extraction well location.
- To remove chromium from the Subunit A portion of the aquifer, an advanced affinity chromatography resin (AACR) system was installed in July 1999. However, due to operational difficulties, the AACR was shut down in May 2001. Sufficient amounts of chromium were removed from Subunit A to reduce air stripper effluent levels to below the maximum contaminant level (MCL) of 100 parts per billion (ppb). The chromium concentrations are measured regularly at the air stripper effluent.
- Goodyear Tire has proposed to accelerate the cleanup of the Subunit A groundwater through the use of air sparging and SVE in the last remaining TCE hot spot. This work is being performed voluntarily since air sparging is not a requirement of the consent decree. The full-scale treatment system began operation in November 2001.

Site Hydrogeology:

- The site lies within the Basin and Range physiographic province, consisting of alluvial basins and mountain ranges. The alluvial deposits of the western Salt River Valley consist of the Upper Alluvial Unit (UAU), the Middle Fine-grained Unit, or Middle Alluvial Unit (MAU) and the Lower Conglomerate Unit, or Lower Alluvial Unit (LAU).
- In the vicinity of the PGA-South site, the UAU is approximately 350 feet thick and is further divided into three subunits: Subunit A, Subunit B, and Subunit C. Subunits A, B, and C are hydraulically connected. Subunit A is composed of silty sand and gravel and extends to a depth of approximately 120 feet below ground surface (bgs). The lower half of Subunit A is saturated and is considered an aquifer. Subunit B is also comprised fluvial sedimentation consisting of sand, sandy-silt, and clay, possibly representing ancient stream deposits. Locally this horizon is thought to act as an aquitard which impedes the vertical flow of groundwater from Subunit A to C. Subunit B generally occurs at depths between 120 and 190 feet bgs. Subunit C consists of silt, sand, and gravel and occurs typically from 190 to 350 feet bgs. Groundwater contained within Subunit C is pumped for drinking water and agricultural purposes.
- Groundwater flow direction within both aquifers is largely influenced by pumping as there are multiple domestic, municipal, irrigation, and remediation (extraction and injection) wells in the vicinity of the site. A groundwater divide occurs within Subunit A in the vicinity of Yuma Road, separating the PGA-North from the PGA-South sites. Subunit A within PGA-South typically flows to the southwest and groundwater within Subunit C is to the west. Depth to groundwater within Subunit A is 60 to 80 feet bgs and approximately at 200 feet bgs within Subunit C.

Contaminants:

The current contaminants of concern in groundwater include trichloroethene (TCE) and chromium. Contaminants of concern at the site may change as new data become available.

Public Health Impact:

Potential health risks may exist for individuals who ingest the contaminated groundwater. There are no known drinking water supply wells on the site. The City of Goodyear regularly monitors their drinking water supply wells, as required by law.

Community Involvement Activities:

A community advisory group (CAG) was formed in January 2001 in conjunction with the PGA North and Western Avenue WQARF sites and meets on a regular basis. These meetings are open to the public. The CAG meeting agendas and minutes can be viewed at <http://www.adeq.az.us/enviro/waste/sps/reg.html>.

Information Repository:

Interested parties can review site information at the information repository located at the Avondale Public Library located at 328 West Western Avenue in Avondale, (623) 932-9415. Site files are also located at the ADEQ main office located at 1110 West Washington Street, Phoenix. Site information at ADEQ is available for review Monday through Friday from 8 a.m. to 5 p.m. To arrange for a time to review the public site file, please call the ADEQ Records Center (602) 771-4378 or (800) 234-5677 (Arizona toll free).

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*In Arizona, but outside the Phoenix area, call toll-free at (800) 234-5677.

**Call EPA's toll-free message line at (800) 231-3075.